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Patient Satisfaction and Pain Management in Ministry of Health Hospitals in Jordan

August 2005

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Mission

Partners for Health Reformplus is USAID's flagship project for health policy and health system strengthening in developing and transitional countries. The five-year project (2000-2005) builds on the predecessor Partnerships for Health Reform Project, continuing PHR's focus on health policy, financing, and organization, with new emphasis on community participation, infectious disease surveillance, and information systems that support the management and delivery of appropriate health services. PHRplus will focus on the following results:

- *Implementation of appropriate health system reform.*
- *Generation of new financing for health care, as well as more effective use of existing funds.*
- *Design and implementation of health information systems for disease surveillance.*
- *Delivery of quality services by health workers.*
- *Availability and appropriate use of health commodities.*

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Abstract

In August 2005, the Partners for Health Reform*plus* implemented a patient satisfaction survey of 471 Ministry of Health (MOH) hospital adult inpatients, the first comprehensive survey in that country of patients' opinions on topics such as physician gender; patient safety; quality of meals; management of pain; level of privacy; the hospital admission process; condition of hospital facilities; and level of communication with physicians and nurses. Patients were generally satisfied with the admissions process, safety and privacy issues, and the cleanliness of their rooms, and they were very impressed with the technical knowledge of physicians and nurses. They expressed more dissatisfaction with the cleanliness of hospital common areas, comfort issues such as the noise level on the ward at night, and, especially among patients in Obstetrics/Gynecology department, management of pain. They also pointed out that many physicians and nurses fail to communicate with them about medical issues such as diagnosis, treatment options, length of hospital stay, and length of recovery. Female respondents expressed a preference for female physicians, while 51 percent of men indicated that the gender of the examining physician did not matter. The survey also revealed certain issues, such as the fact that only 16 percent of patients reported receiving an identification bracelet and 13 percent were not given a physical examination upon admission; while these issues did not necessarily elicit patient complaints, they should be investigated and resolved by hospitals. Results of the patient satisfaction survey thus have broad implications for improving patient care in both the public and private health sectors.

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Acronyms

JD	Jordanian Dinar
MOH	Ministry of Health
PHR*plus*	Partners for Health Reform*plus*
RMS	Royal Medical Service
UNRWA	United Nations Relief Works Agency
USAID	United States Agency for International Development

Acknowledgments

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Executive Summary

This report summarizes findings from the *Patient Satisfaction Survey* that was implemented by the Partners for Health Reform*plus* project in Jordan during the month of August 2005. This nationally representative survey of 471 Ministry of Health (MOH) adult hospital inpatients constitutes the first-ever comprehensive survey of hospital patients' opinions regarding: physician gender preference; hospital admission process; patients' perceived safety; quality of meals served; overall condition of hospital rooms; cleanliness of hospital facilities; patients' level of communication with physicians and nurses; patients' overall assessment of the services they received from physicians, nurses, and ancillary personnel; the level of privacy offered to patients; and patients' opinions regarding the management of their pain. The patients participating in this survey were selected from 24 of the 26 MOH general hospitals located throughout the country. They represent a statistically representative sample of patients from the Internal Medicine, Surgery, and Obstetric/Gynecology departments. This summary presents several of the key findings from the survey; however, readers are encouraged to read further into the document, given the plethora of information that was obtained from respondents with respect to their overall hospital experiences.

Demographic Profile of MOH Hospital Adult Inpatients

- The typical MOH hospital adult inpatient is female, married, 37 years of age, unemployed, with *Tawjihi* (i.e., less than high school-level education) or less in educational attainment, and a household income of roughly JD203 per month (US$286);
- The vast majority of MOH hospital inpatients (94 percent) are Jordanian citizens, the remaining 6 percent are non-Jordanians;
- Approximately 51 percent of hospital inpatients are insured; the remaining 49 percent are uninsured. The insured and the uninsured are significantly different populations. The uninsured tend to be younger in age (34 years of age on average), with average monthly household incomes of roughly JD177; the insured are on average 40 years of age, with monthly household incomes of roughly JD230;
- The uninsured and the insured have similar self-reported health statuses, and appear to be similarly distributed among the various departments within the hospital. In other words, this survey found no evidence that the uninsured are consuming bundles of services that are significantly different from that of the insured;
- Of the insured patient population, 69 percent are insured by the Civil Insurance Program, 29 percent by the Royal Medical Services, and the remaining through commercial insurance companies and other sources.

Patients' Opinions regarding the Admissions Process, Rooms, Safety, Meals, and Visiting Hours

- Roughly 28 percent of respondents rated their experience with the admissions process of the hospital as *excellent*, 43 percent rated it as *good* to *very good*, while roughly 11 percent rated it as *very poor* to *fair*. The remaining respondents had no opinion;
- Nearly 70 percent of respondents indicated that they were escorted to their rooms by someone from the hospital staff. More than 76 percent indicated that it was someone from the nursing staff who escorted them to their rooms;
- Upon arrival to their rooms, 24 percent of respondents rated the room as being in *excellent* condition, 52 percent stated that it was in *good* to *very good* condition, while 24 percent stated that it was in *very poor* to *fair* condition;
- Only 16 percent of patients indicated that they had received a hospital patient identification bracelet upon admission;
- A majority of respondents indicated that their hospital room was cleaned at least once per day, while a significant number of respondents considered the level of cleanliness of the toilets, showers, sinks, and floors of the rooms (wards) to be marginal. A startling 37 percent of respondents rated the cleanliness of such common areas as *very poor* to *fair*;
- Overall, respondents felt safe in MOH hospitals with respect to their personal safety: they did not fear bodily harm or personal injury, or loss of property. The survey did not ask about their attitudes regarding the clinical and environmental safety of the hospitals;
- Overall, respondents view the quality and quantity of MOH hospital meals quite favorably;
- The most often-stated reason for patients not being able to sleep comfortably at night was the noise level of other patients and their visitors.

Patients' Views regarding Staff Communication

- Overall, patients view the level of their communication with physicians and nurses quite favorably; the vast majority rated their overall level of communication with these health professionals to be in the range of *good* to *very good*. However, their overall ratings were somewhat contradictory when respondents were probed further. For instance, when patients were asked what aspect of their illnesses physicians or nurses explained to them, 33 percent stated that physician had explained "nothing to them," while 78 percent stated that nurses had explained "nothing to them";
- When asked how nurses might improve their level of communication with patients, 56 percent of respondents stated that communication might be improved if nurses would "treat them with more respect and dignity"; 25 percent felt this way about physicians;
- When asked what aspect of their illness they would have preferred doctors to explain to them, 51 percent of respondents indicated that they would have preferred that doctors explained their treatment options, type of illness, duration of stay, and length of recovery. Only 10 percent of respondents stated that physicians had explained all four issues;

- Patients' levels of communication with nurses and physicians appear to be the most significant influences on their perceptions of the quality of services they receive from MOH hospitals. Upon conducting a logistic regression, we found that patients who ranked their levels of communication with physicians and nurses as being in the range of *good* to *excellent* have a significantly higher probability of recommending a particular hospital to family members or friends who become ill.

Patients' Views regarding the Management of Their Pain

- Roughly 70 percent of MOH hospital inpatients stated that they experienced pain during their stay in the hospital. Nearly 49 percent indicated that they experienced frequent episodes of pain, 40 percent experienced occasional episodes of pain, while roughly 12 percent reported experiencing rare episodes of pain;

- Of those patients who experienced pain during their stay in the hospital, only 51 percent of them received pain medication from hospital staff, even though 90 percent of respondents indicated that physicians and nurses were aware of their pain;

- A disproportionate number of Obstetric/Gynecology patients indicated that their level of pain was not managed optimally while in the hospital. Of those patients who received no pain medication but reported frequent pain, 62 percent of them where located in the Obstetric/Gynecology department;

- Although the results of this survey strongly indicate that MOH hospital patients are receiving less-than-optimal management of their pain, a majority of respondents (77 percent) rated their overall pain management as being in the range of *good* to *excellent*.

Conclusions

Overall, MOH hospitals appear to be doing a relatively good job at providing services to their patients. When asked to rate their overall level of satisfaction with all services they received from hospitals, nearly 68 percent of respondents stated that overall they were *satisfied* with the level of services they had received. Another 20 percent indicated that they were *extremely satisfied* with the services received. When asked if they would recommend the hospital to friends or family members who became ill and needed hospitalization, an overwhelming amount, 76 percent, indicated that they would recommend the hospital. Only 21 percent of respondents stated they would not. The views expressed were virtually the same for males and for females. In other words, overall, MOH patients seem to value and appreciate the level of services that are currently being provided to them by hospital staff.

On the other hand, they highlighted for policymakers several shortcomings as well. For example, the level of hygiene in common areas, such as toilets, showers, sinks, and floors, appears to be of concern to a significant number of patients. Hence, one policy intervention for hospital directors might be greater supervision of the contract workers who are assigned to clean these areas.

Moreover, it is apparent from this survey that significant gaps in communication exist among MOH physicians, nurses, and patients. The results clearly indicated that patients do not feel that nurses are as involved in the daily management of their cases as they should be. This is most unfortunate, given that our multivariate analysis clearly indicates that the level of communication

between patients and nurses is the single most significant factor that affects patients' perceptions of the services they receive from MOH hospitals.

Finally, nearly half of all MOH inpatients received no pain medication, even though nurses and doctors were aware of their pain. The numbers are quite troubling. The department that appears to be seriously under-managing patients' pain is the Obstetric/Gynecology department. More than 60 percent of patients who experienced frequent episodes of pain, yet received no pain relief, were in this department.

It is apparent from this report that the MOH should consider the implementation of a Continuous Medical Education training program, for selected physician and nurses, on the proper management of pain. This will likely result in better health care outcomes for patients, as well as offset the level of stress that results from the inpatient experience.

1. Background

The Partners for Health Reform*plus* project (PHR*plus*), formerly the Partnerships for Health Reform project, has provided long-term technical assistance to the Jordanian Ministry of Health (MOH) in the field of hospital systems improvement since 1998. The overall project objectives are to improve upon the way in which managerial decision making occurs within MOH hospitals, and to develop methods by which hospital resources are adopted and allocated in a more efficient and equitable way. The cornerstone of this activity, however, is to assist the MOH in the development and implementation of policies and procedures that improve the overall well-being of its hospital patients.

This report presents findings of the first-ever, nationally representative survey of 471 MOH hospital inpatients, a collaborative effort between the MOH Quality Directorate and the PHR*plus* Hospital Systems Improvement Team. The ultimate aim of the survey is to provide the MOH with the following information about its adult inpatient population: 1) a synopsis of their demographic profiles; 2) information regarding patients' perceptions of physicians, nurses, and ancillary staff, including their opinions regarding staff communication and medical competence; 3) patients' assessments of the cleanliness of their rooms and the adequacy of other hotel amenities, and 4) patients' perceptions of the overall management of their pain by physician and nursing staff. This survey was one of several activities that have been implemented during *Phase 4* of the PHR*plus* Hospital Systems Improvement activity in Jordan.

1.1 Hospital Systems Improvement Activity

In Jordan, the governance of MOH hospitals is highly centralized. All significant managerial, budgetary, and procurement matters are ultimately determined by senior-level executives located at the MOH headquarters in Amman. This has created a system in which the needs of individual hospitals and their patients frequently conflict with the policies of the central ministry. This has led many to speculate that MOH hospitals could be more efficiently operated, and the level of quality enhanced, if greater independence were granted to these institutions. In fact, hospital directors have overwhelmingly stated that greater independence in personnel, financial, and procurement matters is a necessary condition for achieving targeted MOH cost containment objectives. However, they also have stressed that the poor, near-poor, and underserved populations must be protected from any adverse effects in the drive towards improved efficiency. One method by which the government may reconcile these ends is to grant hospital directors greater authority over the hospitals' managerial, budgetary, procurement, and personnel matters. As a result, the MOH through its Hospital Systems Improvement (Hospital Decentralization) activity, under the technical leadership of PHR*plus*, has engaged in a systematic move towards enhancing the quality of services that are provided to patients – as well as greater managerial discretion for its hospital directors. The PHR*plus* Hospital Systems Improvement Team has assisted the MOH in implementing this strategy in several Phases. *Phase 1* of the activity began in 1998, with the selection of Princess Raya and Al Karak hospitals as pilot institutions for this effort (Banks, 1999).

During *Phase 2*, the directors of Princess Raya and Al Karak hospitals were provided limited authority over certain aspects of their daily decision making through changes in MOH operating

procedures (Banks, As-Sayaideh, Shafei, and Ghanoum, 2000); this included the establishment of workgroups and committees at each hospital, as well as the training of administrative and technical personnel in various aspects of hospital management and finance.

During the autumn of 2000, PHR*plus* initiated *Phase 3*, which had two primary components: The first was the development of an organizational development plan for each of the pilot hospitals. The plan provided the MOH with a detailed understanding of the governance structure of each hospital, based upon their short-run Hospital Systems Improvement objectives. The second was to obtain a more complete understanding of the cost structure that prevailed at the hospitals. Hence, an essential aspect of *Phase 3* was the completion of two detailed first-ever economic cost studies of MOH hospitals (Banks, As-Sayaideh, and Shaefi, 2002; As-Sayaideh, Shafei, Banks, and Muhtaseb, 2002).

The MOH is currently in *Phase 4* of the activity. The objectives of *Phase 4* are multi-fold: Firstly, the activity has been expanded to comprise a total of 11 pilot facilities; however, targeted interventions have occurred at all 26 MOH hospitals. Secondly, detailed job descriptions have been developed for all MOH hospital personnel, and PHR*plus* is providing technical assistance for their implementation. Thirdly, detailed assessments have been conducted on the Medical Records and Pharmaceutical Departments of all MOH hospitals. Fourthly, a user-friendly Arabic version of the PHR*plus*/Jordan Management Accounting System for Hospitals (also known as MASH) has been developed and tested at selected hospitals. Fifthly, the Hospital Systems Improvement activity has recently implemented several patient-focused initiatives. These initiatives include, but are not limited to, the following: the development of a clinic-hospital obstetric patient referral network at Princess Bade'ah hospital, with plans for implementation at two additional pilot sites (Princess Raya and Al Karak hospitals); the development of antibiotic therapeutic committees at all MOH hospitals, and the initiation of several patient-focused surveys. The current survey represents the first of several surveys aimed at providing the MOH with detailed information on the specific needs of its patient population.

1.2 Organization of the Report

The rest of this report is organized as follows: Section 2 presents the survey design, including sampling methods and field implementation strategies. Section 3 provides a summary profile of the survey respondents, including their demographic attributes, employment and income status, and health insurance status. Section 4 provides an analysis of respondents' self-reported health status, physician gender preference, and initial place of diagnosis. Section 5 presents patients' views regarding the admissions process, the status of their rooms, their relative safety, food consumption, and views regarding visiting hours. Section 6 gives detailed insight into patients' views regarding staff communication (physicians and nurses), as well as their recommendations for improving house staffs' communication with them. Section 7 provides an overview of patients' opinions regarding the management of their pain by physicians and nurses. Section 8 outlines conclusions and policy recommendations.

2. Survey Design and Sampling Methods

2.1 The Sample Frame

The results of this survey were based upon information obtained from a randomly drawn sample of 471, adult (18 years of age and older), Ministry of Health hospital inpatients in Jordan. The respondents were randomly selected from 24 of the 26 general hospitals in the country.[1] The sample selection process consisted of a two-stage process, employing the methods of probability by proportionate sampling (PPS). The first stage consisted of an iterative process, in which randomly generated patients were assigned to each of the 24 hospitals – based upon an estimated sample size calculation.[2] The sample size was increased from 384 to 480 persons in order to achieve more robust estimates. The second stage involved the random selection of the appropriate numbers of patients from each of three hospital inpatient departments (Internal Medicine, Surgery, and Obstetrics/Gynecology). This involved estimating the appropriate numbers of patients to select from each department, and establishing a selection-rule for interviewers, such that a patient of the correct gender was randomly drawn from that department. In other words, interviewers were provided with a grid that contained a randomly generated number (e.g., bed number) for the selection of a patient of a particular gender in a particular room or ward. For example, Internal Medicine, male patient, bed 1, would imply that the interviewer is to select a male patient, in the first bed of the Internal Medicine department. The bed layout and structure of each hospital's Internal Medicine, Surgery, and Obstetric/Gynecology departments was studied in order to establish the appropriate system of patient and bed selection. For instance, several hospitals have combined Internal Medicine and Surgery departments; therefore, rules were designed which enabled interviewers to distinguish between the selection of a specific Surgery patient or an Internal Medicine patient.[3] The hospitals from which patients were selected, the size of their randomly selected patients, as well as their regional categorizations, is included in Annex A.

2.2 Supervision and Field Work

The survey consisted of a survey director, field supervisor, three regional supervisors, and 11 full-time interviewers. The interviewers, field supervisor, and regional supervisors have extensive experience in conducting surveys in Jordan. The survey director has been involved in survey design and sample selection for more than 17 years and has implemented several national and local surveys in Jordan over the past seven years. Interviewers received comprehensive training on the objectives of the survey, its structure, hospital locations, and layouts, interviewing methods, and field data verification methods. Upon completion of the training, the survey instrument was pre-tested and

[1] The excluded hospitals consisted of one facility that specializes in pediatric care only, while the other is a very small facility located near the Iraqi border, to the east of Amman.
[2] Original estimates indicated that a sample frame of 384 patients was sufficient to ensure a statistically representative sample; however, due to the likely design effects of such an analysis, a design factor of 1.25 was utilized. This yielded a field implemented sample size of 480 persons that was distributed proportionately.
[3] The authors may be contacted to obtain more specifics about the selection process.

interviewers received post-pilot training. The survey director and field supervisor provided senior-level management and expertise to the overall design and implementation of the survey. The field supervisor, along with assistance from the regional supervisors, provided overall field supervision to interviewers, as well as field verification of all data collected.

2.3 Data Entry and Cleaning

All data were entered into a customized version of the survey data entry application, CSPro, obtained from the U.S. Bureau of the Census. Consistency checks were performed within CSPro.[4] The data was then exported into SPSS (Statistical Package for the Social Science), where a series of cross-tabulations and descriptive statistics were generated on relevant variables in an attempt to check for inconsistencies in coding as well as data entry errors.

[4] All data was double entered for consistency.

3. Profile of Survey Respondents

The survey respondents consisted of 471 adult inpatients from the Internal Medicine, Surgery, and Obstetric/Gynecology departments at 24 of the 26 Ministry of Health general hospitals. A list of the hospitals sampled, and their sample sizes and geographical locations are presented in Annex A. The geographical distribution of the sample was as follows: 32.3 percent from the northern region, 52.0 percent from the middle region, and 15.7 percent from the southern/Jordan Valley regions. A summary demographic profile of the survey respondents is described in Table 1. Of the 471 respondents, 94.1 percent were Jordanian, 5.1 percent were non-Jordanian permanent residents, and 0.8 percent were non-Jordanian non-permanent residents. The distribution of respondents by gender was 74.5 percent females and 25.5 percent males, quite similar to the distribution found among MOH hospital inpatients when Pediatric and Critical Care Unit/Intensive Care Unit patients are excluded from the estimation, as was done in this survey.[5] Finally, the average age of respondents was 37.1 years old, with an average monthly household income of roughly JD203.94.

3.1 Demographic Profile of Respondents

Table 1: Summary Profile of Respondents

Descriptive statistic	Measure
Jordanian	94.1%
Non-Jordanian (permanent resident)	5.1%
Non-Jordanian (non-permanent resident)	0.8%
Percent female	74.5%
Percent male	25.5%
Mean age	37.1 years
Average monthly household income	JD203.94
Total number of respondents	471

[5] Excluding these categories of patients from the population of MOH hospital inpatients yields an inpatient population that is roughly 76 percent female.

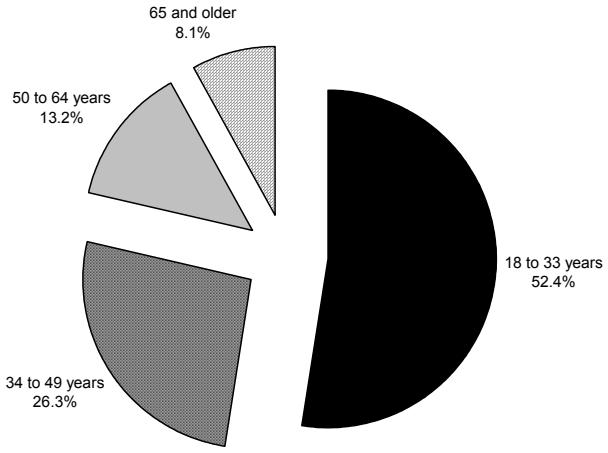
As illustrated in Table 2, 83.4 percent of respondents indicated that they were married, whereas 10.8 percent identified themselves as being single. Separated, divorced, and widowed respondents represented less than 6 percent of the sample. Hence, the vast majority of MOH adult inpatients are married individuals.

Table 2: Profile of Respondents by Martial Status

Marital status	Percentage distribution
Married	83.4%
Single	10.8
Separated	1.1
Divorced	1.3
Widow/Widower	3.4

The survey respondents ranged in age from 18 to 87 years of age, with a median age of 33 years. Figure 1 presents the distribution of respondents by age cohort. As illustrated, 52.4 percent of respondents were 18 to 33 years of age, 26.3 percent were 34 to 49 years of age, 13.2 percent were 50 to 64 years of age, and 8.1 percent were 65 years of age and older.

Figure 1: Percentage Distribution of Age Cohorts



As shown in Table 4, approximately 59 percent of respondents were illiterate or had achieved less than *Tawjihi*[6] in educational attainment. In fact, roughly 82 percent of respondents indicated that their highest educational attainment was that of Tawjihi or less.

Table 4: Profile of Respondents by Educational Attainment

Highest level of educational attainment	Percentage distribution
Illiterate	12.7%
Less than Tawjihi	46.3
Tawjihi	23.1
Diploma (2-year post-Tawjihi)	10.4
Baccalaureate	6.8
Masters degree	0.6

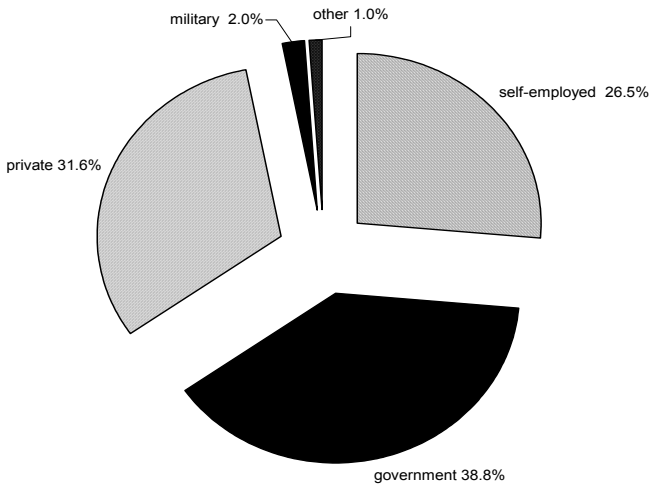
Table 5 describes survey respondents by work status. Approximately 77 percent of respondents were not participating in the labor force: 63.1 percent of respondents were housewives or househusbands, 6.8 percent were unemployed, 1.3 percent were out of the labor force, and 6.2 percent classified themselves as being retired. Of those individuals who identified themselves as being employed either full- or part-time, roughly 39 percent were employed in the public sector. The distribution of employed respondents by work sector is presented in Figure 2.

Table 5: Profile of Respondents by Work Status

Work status of respondent	Percentage distribution
Housewife/Househusband	63.1%
Employed (full-time)	14.6
Employed (part-time)	0.6
Self-employed (full-time)	3.2
Self-employed (part-time)	2.3
Unemployed	6.8
Student	1.9
Out of the labor force (never worked)	1.3
Retired	6.2

[6] Tawjihi is a mandatory examination that is required of all high school graduates in Jordan. A student's performance on the Tawjihi is the determining factor for admission into colleges and universities throughout the country.

Figure 2: Work Sector of Employed Respondents



3.2 Health Insurance Status of Respondents

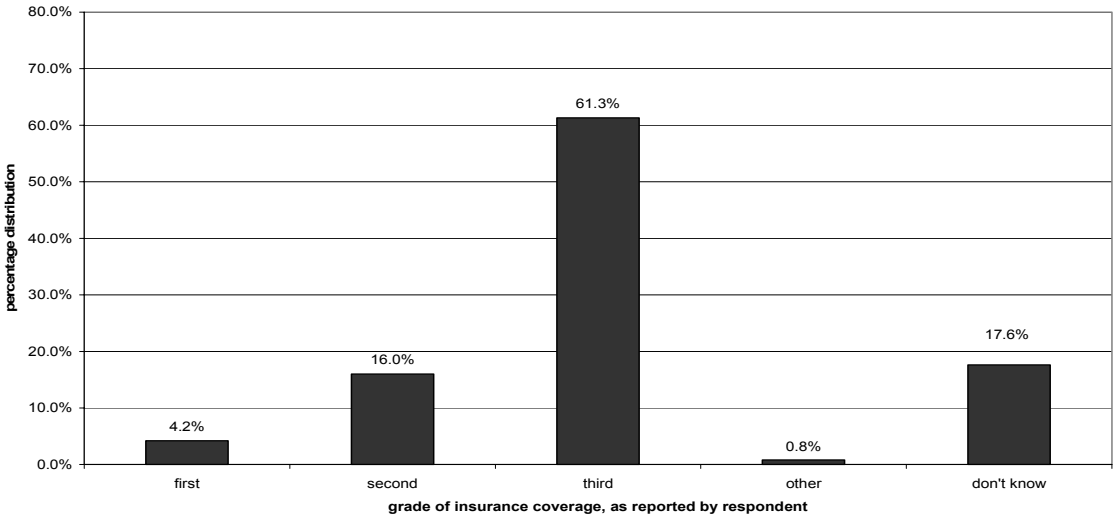
Of the respondents surveyed, 50.5 percent reported having at least one form of health insurance; the remaining 49.5 percent indicated that they were uninsured.[7] Hence, among MOH inpatients, there appears to be a near equal distribution between the insured and uninsured. The vast majority of the insured, 93.3 percent, indicated that they had only one source of health insurance coverage; 6.7 percent indicated that they had more then one source of coverage. This second source of health insurance was primarily paid for by a spouse or child. The distribution of the insured was as follows: 68.5 percent of respondents were insured by the Civil Insurance Program, 29.0 by the Royal Medical Services (RMS), and 2.5 percent by private health insurance, universities, and others. Hence, the vast majority of the insured, 97.5 percent, were insured through public sector.

Figure 3 illustrates the distribution of the insured by the grade status of their insurance. The majority of insured respondents, 61.3 percent, indicated that their insurance was of third-grade status,[8] while only 20.2 percent indicated that they were of second grade or higher. When asked about the person primarily responsible for paying for their health insurance coverage, 50.4 percent of respondents identified their spouse as the person who pays for their health insurance, 29.4 percent identified themselves, 10.5 percent stated that their son or daughter pays for their health insurance, 5.0 percent identified a parent as their source of health insurance coverage, and roughly 4.5 percent did not know or obtained their health insurance from an alternative source, such as retirement benefits.

[7] According to the survey results, the uninsured are more likely to consider the cost of treatment prior to admission. In fact, of the 123 individuals who stated that they considered the cost of treatment prior to admission, 73.2 percent of them were uninsured. Moreover, it is important to recognize that the uninsured in Jordan receive highly subsidized care that is significantly lower than the actual cost of treatment. Hence, a significant amount of cross-subsidization exists within the system.

[8] Insurance grade determines the benefits that are associated with coverage (e.g., semi-private room for first-grade coverage). Third grade is the lowest grade of health insurance in Jordan.

Figure 3: Insured by Grade of Insurance Coverage



Given that the uninsured represented 49.5 percent of respondents (233 persons), providing a comparison of the attributes of the uninsured – relative to the insured – is of import to policymakers. Table 6 provides a summary comparison of insured and uninsured respondents.

Table 6: Summary Comparisons of Insured and Uninsured Respondents

Comparison variable	Insurance status of respondents (mean values)	
	Insured	Uninsured
Age	40 years of age	34 years of age
Monthly household income	JD230.47	JD176.83
Nights in hospital	2.64	3.66

As Table 6 shows, the profile of the insured and uninsured are significantly different.[9] The insured are slightly older, with a monthly household income of roughly 30 percent more; however, the uninsured spend on average one night longer in the hospital than do the insured. What this may be capturing are some slight case-mix differences between the two groups. To explore this issue further, the respondents were grouped by insurance status and hospital department, as well as their self-reported overall health status.

As shown in Tables 7 and 8, there appears to be no evidence to suggest that the uninsured and insured respondents are significantly different in terms of the departments to which they were admitted or in terms of their overall health status – as a self-reported indicator. Therefore, the slightly longer stay in the hospital by the uninsured should be investigated further. The difference between the two groups, in terms of case-mix differences, cannot be determined by the information presented in

[9] A simple statistical calculation of the difference between the mean variable indicates that the uninsured and insured are significantly different groups at the 99 percent confidence level.

this report; however, our anecdotal evidence suggests that case-mix differences are not apparent among the insured and uninsured.

Table 7: Respondents Distributed by Hospital Department and Insurance Status

Hospital department	Insurance status of respondents (percent distribution among departments)	
	Insured	Uninsured
Internal Medicine	20.6%	17.2%
Surgery	28.2	27.0
Obstetrics/Gynecology	51.3	55.8

Table 8: Respondents Distributed by Self-reported Health Status and Insurance Status

Respondents' view of their health status, as compared to others of the same age and gender (self reported)	Insurance status of respondents (percent distribution by self-reported health status)	
	Insured	Uninsured
Excellent	19.7%	19.7%
Very good	26.1	27.5
Good	32.4	32.6
Satisfactory	14.7	13.3
Bad	7.1	6.9

In summary, the typical MOH adult inpatient is an unemployed, married female, approximately 37 years of age, with Tawjihi or less in educational attainment, a monthly household income of roughly JD204, and in relatively good health. Her health insurance status can equally be that of an insured or uninsured person. If insured, her spouse is the primary policyholder of her health insurance benefits, and those benefits will typically provide her with third-grade entitlements. Conversely, if she is uninsured, her monthly household income will be – on average – 30 percent less than that of an insured person of similar demographic profile.

4. Health Status of Survey Respondents

Overall, a majority of survey respondents rated their health status as being at least "good" when compared to others of the same age and gender. As shown in Table 9, 19.7 percent of respondents rated their overall health status as "excellent," 26.8 percent as "very good," and 32.5 percent as "good." Roughly 21 percent of the surveyed population rated their overall health status as only "satisfactory" or "bad." In other words, the vast majority of survey respondents considered themselves to be in relatively good health as compared to others within their demographic cohort. Moreover, when asked about the frequency of their physical examinations, only 16.2 percent of respondents indicated that they have checkups on a regular basis. Of those who had checkups on a regular basis, 60 percent of them rated their health status as good or above.

Table 9: Respondents Self-reported Health Status

Respondents' view of their health status, as compared to others of the same age and gender (self-reported)	Percentage of respondents
Excellent	19.7%
Very good	26.8
Good	32.5
Satisfactory	14.0
Bad	7.0

When asked about their medical history with respect to diabetes, heart disease, and hypertension, 10. 6 percent of respondents acknowledged having a history of diabetes, 9.1 percent indicated heart disease, and 14.0 percent cited a history of hypertension. Moreover, of those respondents who cited a history of diabetes, heart disease, or hypertension, approximately 14 percent indicated that they were not taking prescription drugs on a regular basis. For the respondents overall, 27.6 percent (130 persons) indicated that they take prescription drugs on a regular basis. Of this group, 97.7 percent stated that the drugs were utilized for the treatment of a chronic ailment. Hence, the vast majority of MOH inpatients (72.4 percent) do not consume prescription drugs on a regular basis. Furthermore, results indicate that a non-trivial proportion of patients (14 percent) with chronic ailments (diabetes, heart disease, and hypertension) are not receiving proper drug management of their illnesses.

Finally, when asked if they had taken days off from work, school, or housework due to an illness over the past six months, 36.1 percent of respondents indicated that they had done so. Of this number (170 persons), 27.6 percent were Internal Medicine patients, 21.8 percent were Surgery patients, and 50.6 percent were Obstetric/Gynecology patients. In this last group, as one would expect, a majority of patients were pregnant women. The average number of days taken off by this group of respondents was roughly 20 days.

4.1 Site of Initial Diagnosis

As illustrated in Table 10, the vast majority of respondents, 75.9 percent, received their initial diagnosis at a MOH hospital or health center. Of those individuals who received their initial diagnosis at MOH hospitals, only 2.8 percent of them indicated that they were transferred to the current facility; that is, the vast majority of inpatients appear to be diagnosed and admitted at the same hospital facility. What is most troubling about these results is the relatively small number of persons (16.6 percent) who received their initial diagnosis at the health center level of service delivery. In fact, when one considers that 67.7 percent of those who were admitted to the hospital were admitted through the hospital emergency room (as will be discussed in Section 5), it becomes apparent that the MOH must develop a more effective system of coordination and referral among its hospitals and health centers. Moreover, an equal proportion of respondents received their initial diagnosis at MOH health centers and private clinics, roughly 33 percent of respondents. Of these individuals, 45.1 percent were insured and 54.9 percent were uninsured. The insured who sought treatment at private clinics were covered by the Civil Insurance Program or the Royal Medical Services, 45.1 percent and 54.9 percent, respectively.

Table 10: Site of Initial Diagnosis

Place where respondent received his/her initial diagnosis that was associated with this current hospitalization	Percent respondents
MOH health center	16.6%
MOH hospital	59.3
RMS health center	.2
RMS hospital	.7
Private hospital	1.6
Private clinic	16.6
United Nations Relief Works Agency (UNRWA)	4.7
Other facility	.2

4.2 Physician Gender

As shown in Table 11, 74.9 percent of respondents stated that their initial physical examination at the hospital was conducted by a male physician, 15.9 percent stated that it was conducted by a female physician, and 6.4 percent indicated that they had both male and female physicians during their initial physical examinations. Surprising, however, was the number of persons (13) who stated that they did not have a physical examination during their stay in the hospital.[10]

[10] These patients were distributed over five hospitals.

Table 11: Gender of Physician Conducting Initial Examination

Gender of physician conducting initial physical examination of respondent	Percent respondents
Male	74.9%
Female	15.9
Male and female	6.4
Did not have a physical examination	2.8

Of interest to policymakers is the current and potential role of female physicians within MOH hospitals. Current debate focuses around the need for more female physicians, given the social and cultural aspects of health care delivery. The study therefore sought to better understand patients' preferences for physicians of a particular gender.

When queried about their physician preference with respect to the gender of the physician, the results of the survey were quite interesting. As shown in Table 12, of the respondents who had a male physician during their physical examination, only 20 percent indicated that they would have preferred a male, 35.7 percent indicated that they would have preferred a female, and 44.7 percent indicated that the gender of the physician did not matter. However, the majority of respondents who had a female physician during their physical examination indicated that they preferred a female physician.

Table 12: Respondents' Physician Gender Preference by Actual Physician Gender

Gender of physician conducting physical examination	Prefer male physician	Prefer female physician	Gender does not matter
Male	19.5%	35.7%	44.7%
Female	4.0	68.0	28.0
Male and female	6.7	56.7	36.7
Did not have a physical exam	23.1	61.5	15.4

To obtain a better sense of physician preference, we disaggregated the data by the gender of the respondent. The results are displayed in Table 13. Forty-five percent of male respondents indicated that they preferred a male physician, while 50.8 percent indicated that the gender of the examining physician did not matter. Female respondents, on the other hand, illustrate a strong preference for female physicians: 56.1 percent indicated that they preferred a female physician, while 37.3 percent of them indicated that the gender of the physician did not matter.[11] Based upon this descriptive analysis, it appears that a policy aimed at employing and retaining more female physicians within MOH hospitals may be an optimal strategy not only for the well-being of female patients, but for male patients as well. Male patients, as the data indicate, do not have the aversion toward female physicians that is commonly assumed in Jordan. While, unlike female patients, male patients did not express a strong preference for female physicians, more male patients indicated that the gender of the physician did not matter than those who stated that they preferred male physicians. That is, male patients remain open to the possibility of a female physician.

[11] A more rigorous analysis of the data, through a discrete choice model, such as Logit estimation would clear yield more robust results. Once cannot robustly confirm physician preference through mere descriptive statistics.

Table 13: Physician Gender Preference by Sex of Respondent

Gender of respondent	Prefer male physician	Prefer female physician	Gender does not matter
Male	45.0%	4.2%	50.8%
Female	6.6	56.1	37.3

In summary, MOH patients in general view their overall health status as "good" to "excellent." However, a significant number, 21 percent, consider themselves to be in "satisfactory" to bad health. Most startling, however, are the relatively few persons, 16 percent, who indicated that they had physical examinations on a regular basis. It becomes apparent, upon analysis of the data, that a nationally implemented preventative health program is most needed in Jordan. The cornerstone of any health promotion campaign is to provide populations with information concerning the benefits of annual or bi-annual physical examinations – for both early detection and prevention of chronic and acute ailments. This, coupled with a concerted effort of behavioral change on the part of the population – through smoking cessation, exercise, and weight reduction – may assist in reducing what appears to be a relatively high rate of reported heart disease, hypertension, and diabetes among respondents.

5. Admission, Room Status, Safety, Meals, and Visiting Hours

Less than 10 percent of survey respondents (45 persons) had been transferred from another hospital facility. Of those who were transferred, 88.9 percent indicated they were transferred from other Ministry of Health hospitals. Therefore, while the transferring of patients among hospitals does occur, it appears to be a relatively rare event – and one that almost exclusively involves MOH-to-MOH transfers. As discussed in Section 4, the vast majority of respondents received their initial diagnosis from a MOH hospital or health care center. Of these, roughly 68 percent were admitted through hospital emergency rooms, as opposed to one of the hospitals' outpatient departments. This represents an inefficient and costly use of hospital emergency rooms.[12] Of the total number of respondents, 52 percent stated that the admissions process was clearly explained to them, while 31.8 percent indicated that it was not. The remaining 15.7 percent were uncertain as to whether or not the admissions process was clearly explained to them or a family member.

5.1 Respondents' Views regarding the Admissions Process

Table 14 provides an overview of patients' ratings of the services they received from hospital admissions departments. Overall, patients viewed the admissions services quite favorably: More than 83 percent of respondents indicated that they were admitted immediately, and 71 percent stated that they had received "good" to "excellent" services. Only 16 percent (75 persons) indicated that they had to wait; however, of those patients who waited, the wait appeared to be substantial – 62.7 percent of them experienced a wait of more than one-hour in length (Table 15).

Table 14: Patients Rankings of Services Received from Hospital Admissions Departments

Patients' ranking of services received from hospital's admissions department	Percent respondents
Excellent services	28.2%
Very good services	17.4
Good services	25.7
Fair services	6.4
Poor services	4.0
Very poor services	.4
Don't know how I would rank the services received	17.8

[12] The cost imposed on the emergency room must be considered in terms of economic costs, which take into account both accounting and opportunity cost (such as the cost of waiting and overcrowding).

Table 15: Waiting Times of Respondents, Not Directly Admitted into Hospital

Waiting times of respondents not directly admitted into hospital	Percent respondents
Less than 15-minute wait	6.7%
15 to 30-minute wait	18.7
31 to 45-minute wait	4.0
46 to 60-minute wait	8.0
More than 1 hour but less than 2 hours	22.7
2 hours or more	40.0

As Table 16 shows, patients appear to remain in the department to which they were admitted; that is, there appears to be an insignificant amount of interdepartmental transferring of patients.

Table 16: Percentage Distribution of Respondents by Original Department of Admission and Current Inpatient Department

	Internal Medicine	Surgery	Obstetric/ Gynecology	Intensive Care/ Critical Care Unit
Original department to which patient was admitted	17.8%	27.6%	52.9%	1.5%
Current inpatient department (at time of survey)	18.9	27.6	53.5	

Of the 471 respondents surveyed, 70.1 percent stated that they were escorted to their rooms upon admission, 76.1 percent of them by someone from the nursing staff (Table 17). However, 27.6 percent indicated that they were not escorted to their room. Hence, a significant number of MOH inpatients are not receiving the appropriate escort services. Of those respondents who were not escorted, 81 percent indicated that they would have preferred to be escorted.

Table 17: Personnel Responsible for Escorting Respondents to Their Room (Ward)

Hospital personnel that escorted patients to their ward (room)	Percentage distribution
Someone from the admission department staff	1.8%
Someone from the nursing staff	76.1
Someone from the physician staff	4.5
Other hospital staff member	17.2
I don't know who escorted me	0.3

5.2 Respondents' Views regarding the Hospital Room (Ward)

Respondents were asked to rank the overall conditions of their hospital rooms upon arrival. As indicated in Table 18, 75.1 percent of respondents rated the condition of their rooms as being in "good" to "excellent" condition, while roughly 24 percent rated their rooms as being in "very poor" to "fair" condition. Patients who rated their rooms as being in "very poor" to "fair" condition were, on average, from slightly older hospitals.

Table 18: Respondents Ranking of the Overall Condition of Their Room (Ward)

Respondents ranking of the overall condition of their room (ward) upon arrival	Percent respondents
Excellent	23.8%
Very good	19.6
Good	31.7
Fair	17.2
Poor	4.3
Very poor	2.3
Do not know what the condition was	1.1

When broken down by hospital department, there appears to be only modest variation in patients' rankings of their overall room conditions (Table 19). What is apparent, however, is that patients consistently view the Internal Medicine department more favorably than either the Surgery and Obstetric/Gynecology departments. The Internal Medicine department received fewer unfavorable ratings than the other departments as well. It appears that the Surgery department is viewed the least favorably in terms of the overall condition of rooms.

Table 19: Respondents Ranking of the Overall Condition of Their Room (Ward), by Department

Respondents ranking of the overall condition of their room (ward) upon arrival	Internal medicine	Surgery	Obstetrics/ Gynecology
Excellent	28.1%	26.9%	20.7%
Very hood	22.5	14.6	21.1
Good	30.3	27.7	34.3
Fair	13.5	21.5	16.3
Poor	3.4	2.3	5.6
Very poor	1.1	3.8	2.0
Don't know what the condition was	1.1	3.1	0.0

Although MOH patients appear to be quite satisfied with the overall condition of their rooms, only 16.3 percent of them received instructions from the hospital staff on the correct usage of their room facilities (e.g., TV, restroom, shower, bed). Of the 83.7 percent of patients (394 persons) who did not receive instructions on the proper use of their room facilities, 81.3 percent stated that they would have preferred to have had someone explain the use of their room facilities to them.

A critical component of the hospital admission process is the issuance of identity bracelets to admitted patients. Only 16.1 percent of patients indicated that they had received hospital identification bracelets upon admission to the ward, even though MOH operating procedures stipulate that all patients be issued a bracelet. A single hospital provided 67.1 percent of all bracelets that were issued, representing roughly 51 patients. Furthermore, only 11 of the 24 hospitals surveyed provided identification bracelets to their patients. Failure to provide identification clearly places patients at substantial and unnecessary risk of medical error. Of the 76 patients who received identification bracelets, 63.2 percent of them were Obstetric/Gynecology patients, 34.2 percent were Surgery patients, and 2.6 percent were Internal Medicine patients.

Respondents were queried about the frequency with which their hospital rooms were cleaned. As shown in Table 20, 67.9 percent of respondents indicated that their rooms were cleaned more than once per day, while 24.2 percent indicated that the room was cleaned at least once per day. A similar pattern is observed when the data are disaggregated by hospital department (Table 21). Hence, it appears that the vast majority (92 percent) of MOH hospital rooms are cleaned at least once per day, with little to no variation in cleaning routine by hospital department.

Table 20: Respondents Room (ward) Cleaning Schedule

How often respondents stated that their rooms (wards) were cleaned	Percent respondents
My room was cleaned once per day	24.2%
My room was cleaned more than once per day	67.9
My room was cleaned upon request	1.1
My room was never cleaned	0.8
I don't know how often my room was cleaned	5.9

Table 21: Respondents Room (Ward) Cleaning Schedule, by Department

How often respondents stated that their rooms (wards) were cleaned	Internal Medicine	Surgery	Obstetrics/ Gynecology
My room was cleaned once per day	19.1%	23.8%	26.2%
My room was cleaned more than once per day	78.7	63.8	66.3
My room was cleaned upon request	1.1	2.3	0.4
My room was never cleaned	1.1	0.0	1.2
I don't know how often my room was cleaned	0.0	10.0	6.0

Tables 22 and 23 list respondents' answers to queries about the frequency with which their bed sheets and other bed linens were changed. A majority of respondents indicated that their sheets and linens were changed on a daily basis, while a startling 12.7 percent indicated that they were never changed. When viewed by hospital department, the pattern is quite similar. Although a majority of patients indicated that their bed sheets and linens were changed daily, a significant number, including 18.3 percent in Obstetrics/Gynecology, indicated that their bed sheets and linens were never changed.

Table 22: How Often Respondents Bed Sheets were Changed

How often respondents stated their	Percent respondents
My bed sheet were changed daily	68.6%
My bed sheets were changed every other day	5.1
My bed sheets were changed once per week	1.3
My bed sheet were changed upon request	5.7
My bed sheets were never changed	12.7
I don't know how often my bed sheets were changed	6.6

Table 23: Frequency of Changing Respondents Bed Sheets, by Department

How often respondents stated that their bed sheets were changed	Internal Medicine	Surgery	Obstetrics/ Gynecology
My bed sheets were changed daily	74.2%	71.5%	65.1%
My bed sheets were changed every other day	6.7	7.7	3.2
My bed sheets were changed once per week	1.1	1.5	1.2
My bed sheets were changed upon request	7.9	5.4	5.2
My bed sheets were never changed	7.9	5.4	18.3
I don't know how often my bed sheets were changed	2.2	8.5	7.1

Respondents were asked to rate the overall cleanliness of the toilets, showers, sinks, and floors of the hospital. As Table 24 shows, the overall responses were favorable. Approximately 58.1 percent of respondents rated the level of cleanliness of these areas from "good" to "excellent." However, a significant number, 37.0 percent, viewed the level of cleanliness as being "very poor" to "fair," with 22 percent of respondents indicating that it was "very poor" to "poor." It becomes apparent from these results that, while patients view the overall structure of their hospital rooms favorably, a significant number consider the overall cleanliness of the communal areas of rooms to be of poor hygiene. As illustrated in Table 25, the toilets, showers, sinks and floors of the Internal Medicine department are viewed less favorably than those of the Surgery and Obstetric/Gynecology departments. These results indicate that a significant amount of work remains to be done across hospital departments with respect to hygiene in the common areas of patients.

Table 24: How Respondents Rated the Level of Cleanliness of Toilets, Showers, Sinks, and Floors

How respondents rated the level of cleanliness of the hospital's toilets, showers, sinks and floors	Percent respondents
Excellent	18.0%
Very good	15.3
Good	24.8
Fair	14.9
Poor	11.3
Very poor	10.8
I don't know what the level of cleanliness was	4.9

Table 25: How Respondents Rated the Level of Cleanliness of Toilets, Showers, Sinks, and Floors, by Hospital Department

How respondents rated the level of cleanliness of the hospital's toilets, showers, sinks and floors	Internal Medicine	Surgery	Obstetrics/ Gynecology
Excellent	23.6%	19.2%	15.5%
Very good	15.7	16.9	14.3
Good	20.2	15.4	31.3
Fair	10.1	14.6	16.7
Poor	19.1	10.8	8.7
Very poor	11.2	10.8	10.7
I don't know what the level of cleanliness was	0.0	12.3	2.8

Respondents were asked to rank their feelings about overall safety of their hospital rooms. The definition of safety surveyed was that of the patients' personal safety – from threat of bodily harm, personal injury, or loss of property. (Patients were not asked their perceptions of hospitals' clinical or environmental safety practices.) The vast majority of respondents consider MOH hospitals to be "good" to "excellent" in ensuring their overall safety (Table 26); 84.1 percent of respondents rated the overall safety of their rooms, as being at least "good." This view is held across departments as well (Table 27).

Table 26: Respondents' Feelings about the Overall Safety of their Hospital Room

How respondents rated their feelings concerning the overall safety of their hospital room	Percent respondents
Excellent	37.4%
Very good	21.4
Good	25.3
Fair	7.6
Poor	4.2
Very poor	2.5
I don't know what the level of safety was like	1.5

Table 27: Respondents' Feelings about the Overall Safety of their Hospital Room, by Department

How respondents rated their feelings concerning the overall safety of their hospital room	Internal Medicine	Surgery	Obstetrics/ Gynecology
Excellent	41.6%	37.7%	35.7%
Very good	22.5	21.5	21.0
Good	28.1	21.5	26.2
Fair	4.5	10.0	7.5
Poor	1.1	5.4	4.8
Very poor	1.1	0.8	4.0
I don't know what the level of safety was like	1.1	3.1	.8

5.3 Respondents' Views regarding Hospital Meals

One of the most important services offered by hospitals are the meals that are served to their patients. The quality, frequency, and temperature of meals are known to affect patient comfort as well the overall healing process. Of the patients interviewed, only 26.1 percent indicated that they were under the care of a dietician; 45.9 percent stated that they were not. Most startling, however, was the proportion of patients, 28 percent, that stated they did not know if they were under the care of a dietician. When respondents were asked if they had eaten any hospital meals during their hospital stay, 72.2 percent reported that they had eaten at least one meal; 27.8 percent of inpatients reported that they had not eaten a hospital meal at any time prior to the interview. Roughly 79.4 percent of those who did not eat a hospital meal were women. As indicated in Table 28, the most often-cited reason for patients not eating a hospital meal was that no meal was offered to them.[13]

Table 28: Respondents Reasons for Not Eating Any Hospital Meals

Respondents reasons for not eating any meals during their stay in the hospital	Percentage of males	Percentage of females	Percentage of total respondents
No meals were offered to me	81.5%	56.7%	61.8 %
I do not trust hospital food	11.1	17.3	16.0
I prefer to eat home cooked food	7.4	22.1	19.1
Other reasons	0.0	3.8	3.1

Of the respondents who indicated that they had not eaten because no meal was offered to them, 45.7 percent had spent less than one night in the hospital, while 33.3 percent of them had spent one night in the hospital. More troubling, however, is the fact that 21 percent of them had spent at least two nights in the hospital.

Of those patients who did eat at least one hospital meal, 74.3 percent stated that the meals were served in a timely and convenient fashion. When asked about the serving temperature of the meals they received, 72.9 percent of respondents rated the serving temperature as "good" to "excellent." Table 29 summarizes respondents' ratings of the temperature of the meals they received during their stay in the hospital. Both male and female respondents view the overall serving temperature of the hospital meals favorably. However, males were less favorable than females in their ratings of the temperature of hospitals' meals. More than 33 percent of male respondents rated the temperature of the food served by hospitals as "very poor" to "fair," compared to only 23 percent of female respondents.

[13] Women represented over 75 percent of the respondents who stated that no meal was offered to them. They were equally distributed among the Obstetric/Gynecology and Surgery departments.

Table 29: Respondents Rating of the Overall Temperature of the Hospital Meals Served

How respondents rated the overall temperature of the meals that were provided to them during their stay in the hospital	Percentage of males	Percentage of females	Percentage of respondents
Excellent	20.4%	18.7%	19.2%
Very good	19.4	24.0	22.7
Good	24.7	33.3	31.0
Fair	18.3	17.9	18.0
Poor	15.1	4.1	7.1
Very poor	2.2	.8	1.2
I don't know how I would rank it	0.0	1.2	0.9

Table 30 summarizes respondents' views regarding the quantity of meals served during their stay in the hospital. When asked about the quantity of meals served, 22.9 percent of respondents stated that they were "extremely satisfied" with the quantity of meals served, 57.6 percent stated that they were "satisfied," 16.8 percent stated that they were "dissatisfied," and only 2.4 percent stated that they were "very dissatisfied." A larger proportion of male patients indicated that they were dissatisfied with the quantity of meals served, as compared to female patients.

Table 30: Respondents Ranking of Satisfaction with the Quantity of Meals Served, by Gender

How respondents ranked their level of satisfaction with the quantity of meals served	Male	Female
Extremely satisfied	23.7%	22.8%
Satisfied	51.6	60.2
Dissatisfied	20.4	15.4
Very dissatisfied	4.3	1.6

5.4 Respondents' Views regarding Sleeping and Visiting Hours

Of the patients surveyed, 59 percent stated that they were able to sleep comfortably in their hospital rooms, while 41 percent stated that they could not. As shown in Table 31, the relative sleeping comfort of patients exhibits little variation across hospital departments.

Table 31: Respondents Ability to Sleep Comfortably, by Department

Hospital department	Percent of respondents who were able to sleep comfortably	Percent of respondents who were not able to sleep comfortably
Internal Medicine	62.9%	37.1%
Surgery	60.0	40.0
Obstetrics/Gynecology	57.1	42.9

Respondents' most often-stated reason for not being able to sleep comfortably in their hospital rooms was the noise level of other patients. The other often-cited reason was the temperature of the room. These respondents found the room temperature during the month in which this survey was conducted (August 2005) as too hot to sleep comfortably.

When asked about visiting hours for their family members and friends, 79.2 percent of respondents indicated that the number of visiting hours per day were sufficient. When asked about their expected length of stay in the hospital, 77.7 percent of patients indicated that hospitals admissions' staff did not explain to them the total number of days that they would remain in the hospital as a result of their illness. Hence, the MOH should provide more information to patients regarding their expected length of stay in the hospital.

Table 32 provides a summary of respondents' overall levels of satisfaction with their hospital rooms and the various hotel amenities offered. More than 80 percent of respondents indicated that they were "satisfied" to "extremely satisfied."

Table 32: Respondents Level of Overall Satisfaction with Their Room and Its Various Hotel Amenities

How respondents ranked their overall level of satisfaction with their hospital room and the various hotel amenities that were provided to them	Percentage of males	Percentage of females	Percent of respondents
Extremely satisfied	22.5%	11.1%	14.0%
Satisfied	57.5	71.8	68.2
Dissatisfied	16.7	14.0	14.6
Very dissatisfied	2.5	2.0	2.1
Don't know how I would rank my overall satisfaction	.8	1.2	1.1

6. Respondents' Views Regarding Staff Communication

A series of questions were asked regarding patients' abilities to identify physician, nursing, and administrative staff, as well as the ranking of their level of communication with such personnel.

The vast majority of respondents were able to clearly identify physician, nursing, and cleaning staff (Table 33). However, most respondents (56.3 percent) were unable to identify administrative staff. When asked why the administrative staff was not readily identifiable, the most often-cited reasons were that they did not wear identifiable clothing, and they rarely or never introduced themselves. In order to adequately address this issue, the Ministry of Health should consider the mandatory wearing of hospital identification badges by all administrative staff.

The questions that pertained to physician and nursing staff focused on obtaining information from respondents on the role of each, with respect to overall patient management. Possessing the ability to clearly articulate medical and non-medical information to patients, as well as listen to their concerns regarding treatment options, duration of stay, and length of recovery – these are essential attributes for both physicians and nurses.

Table 33: Respondents' Ability to Identify Physician, Nursing, and Administrative Staff

Questions regarding staff identification	Percent respondents[1]	
	Yes	No
Were physician and nursing staff easy to identify?	84.9%	14.0%
Were hospital administrative staff easy to identify?	39.7	56.3
Were cleaning staff easy to identify?	98.3	1.3

1. Residual percentages refer to percent who indicated that they did not know

Regarding medical staff–patient communication, only 69.4 percent of respondents indicated that physicians had asked them or their family members about their medical history, while only 32.1 percent of respondents indicated that someone from the nursing staff had. When asked which aspects of their illnesses (diagnosis, treatment options, prognosis, etc.) were explained to them by hospital physicians and nurses, 78.6 percent of respondents indicated that nurses explained "nothing" to them, while 33.1 percent stated that physicians had explained "nothing" (Table 34). When asked specifically if medical staff had told them of their type of illness, 64.5 percent of respondents indicated that physicians explained the type of illnesses they had, while only 17 percent stated that nurses had. From these and other responses in Table 34, as well as the difference in communication between patient and physician and patient and nurse, it became apparent that nurses have a limited role in the daily management of hospital patients. This is likely a result of several factors, such as the aforementioned professional culture with respect to patient management, that exists at MOH hospitals. Physicians communicate more essential medical information to patients than do nurses; still, survey finding show that many are reluctant to communicate. For example, only 13.8 percent of

respondents indicated that physicians had explained to them their length of recovery, and only 20.8 percent indicated that they had explained to them their expected length of stay.

Table 34: Aspects of Patients' Illnesses that were Explained by Physicians and Nurses

Aspects of the patient's illness that were explained	Percent respondents[1]	
	Physician	Nurses
Type of illness	64.5%	17.0%
Treatment options	49.0	8.1
Duration of hospital stay	20.8	3.8
Length of recovery	13.8	2.5
Nothing was explained to me	33.1	78.6

[1]Columns and rows do not add to 100 percent; multiple responses are possible

Hence, it appears that MOH physicians should spend more time explaining to patients their various treatment options, durations of stay in the hospital, as well as their lengths of recovery. In fact, when asked what aspects of their illnesses they would prefer doctors to explain to them, 50.5 percent of respondents indicated that they would prefer that doctors explain each of the following topics (as a bundle of information): 1) type of illness; 2) treatment options; 3) duration of stay; and 4) length of recovery. Only 10 percent of respondents indicated that physicians currently do this. Therefore, MOH physicians should consider – as routine practice – discussing all four topics with their patients.

Table 35: Respondents' Rankings of Their Level of Communication with Doctors and Nurses

How respondents rated their level of communication with physician and nurses	Percent respondents	
	Physicians	Nurses
Excellent	55.0%	44.2%
Very good	20.4	18.7
Good	14.2	21.4
Fair	5.5	7.4
Poor	1.3	4.0
Very Poor	.8	2.3
I don't know how I would rank it	2.5	1.9

While the results of this survey clearly demonstrate that both physicians and nurses could improve their communication skills as they pertain to the medical management of their patients, the levels of overall communication of many physicians (55 percent) and nurses (44 percent) were rated "excellent" by MOH hospital patients. As illustrated in Table 35, 90 percent of respondents rated their overall communication with physicians as being "good" to "excellent," while 84.3 percent rated their level of communication with nurses as such. Patients who did not rate their communication with physicians and nurses as "excellent" were asked to state how the level of communication between themselves and the physician and nursing staff might be improved. Table 36 lists the responses: respondents indicated that communication between themselves and physicians might be improved if physician were to "spend more time with [me]" (41.7 percent), "listen more to [my] concerns" (62.1

percent), "speak in simpler terms" (18.0 percent), discuss "treatment options" (22.2 percent), and "treat [me] with more respect and dignity" (24.6 percent). Approximately 56 percent felt that communication between themselves and nurses might be improved if nurses were to "treat them with more respect and dignity."

Table 36: How Communication between Physicians, Nurses and Patients Might Be Improved

How might communication between yourself and the physician and nursing staff be improved	Percent of respondents[1]	
	Physicians	Nurses
By spending more time with me	41.7%	32.3%
By listening to more of my concerns	62.1	46.7
If he/she were to speak in simpler terms	18.0	5.7
By asking my opinion about treatment options	22.2	6.1
By treating me with more respect and dignity	24.6	56.3
By providing a call buzzer near my bedside	7.4	30.0
Other comments	15.6	2.7

[1]columns and rows do not sum to 100 percent, multiple responses possible

As illustrated in Table 37, a majority of respondents view the overall medical knowledge of the physician and nursing staff quite favorably. Nearly 89 percent of respondents rated the medical knowledge of physician staff as "good" to "excellent." A similar measure (roughly 86 percent) was obtained for the nursing staff. Hence, it appears that lack of technical knowledge among physicians and nurses is not the reason for their lack of communication with patients about medical issues.

Table 37: How Respondents Rated the Medical Knowledge of the Physician and Nursing Staff

How patients rated the medical knowledge of the physician and nursing staff	Percent distribution among patients	
	Physicians	Nurses
Excellent	52.2%	37.6%
Very good	26.6	26.4
Good	10.0	22.1
Fair	2.3	4.9
Poor	.6	1.3
Very poor	0.0	1.3
I don't know how I would rank it	8.1	6.4

As illustrated in Table 38, respondents were overall quite satisfied with the level of privacy offered to them by physicians and nurses when discussing personal and medical information. In fact, a resounding 85.1 percent of respondents indicated that they were "satisfied" to "extremely satisfied" with the level of privacy. Relatively few respondents, 13.2 percent, expressed that they were "very dissatisfied" to "dissatisfied" about the level of privacy offered to them. Respondents' views regarding the level of privacy offered to them by physicians and nurses exhibits little variation across gender.

Table 38: How Respondents Rated Their Overall Satisfaction with Privacy Offered When Communicating Personal and Medical Information to Doctors and Nurses

How respondents ranked their overall level of satisfaction with the level of privacy offered to them when communicating personal and medically related information to doctors and nurses	Percentage of males	Percentage of females	Percentage distribution among respondents
Extremely satisfied	38.3%	25.4%	28.7%
Satisfied	48.3	59.1	56.4
Dissatisfied	7.5	12.6	11.3
Very dissatisfied	2.5	1.7	1.9
Don't know how I would rank my overall satisfaction	3.3	1.1	1.5

Respondents' ratings of their overall level of satisfaction with physicians, nurses, and ancillary staff are shown in Table 39. Respondents were overwhelmingly satisfied with the overall services that they received from physicians and nurses; however, they exhibited significant reservations in expressing similar views towards ancillary staff members. In fact, the most often-cited response regarding ancillary personnel was "I don't know."

Table 39: How Respondents Rated Their Overall Satisfaction with Physicians, Nurses, and Ancillary Staff

How respondents ranked their overall level of satisfaction with the services provided by physician, nursing and ancillary staff	Percent respondents		
	Physicians	Nurses	Ancillary
Extremely satisfied	27.4%	21.0%	21.0%
Satisfied	63.5	66.0	36.9
Dissatisfied	6.6	9.8	3.2
Very dissatisfied	.4	1.5	.6
Don't know how I would rank my overall satisfaction	2.1	1.7	38.0

Table 40 presents summary findings of respondents' overall rankings of the services provided by hospital-based physicians, by regional distribution of patients. Responses demonstrate a significant regional variation in respondents' rankings of these services. Respondents in the Southern/Jordan Valley region exhibited a higher level of satisfaction: 50.0 percent of respondents in this region indicated that they were "extremely satisfied" with the services provided by physicians, as compared to 36.8 percent of respondents in the Northern region and 14.7 percent in the Middle region, which includes Amman. Sixty percent of respondents in the Northern region indicated that they were "satisfied" with the services, as were 72.7 percent of respondents in the Middle region. Respondents' views regarding their overall ratings of the services received from nursing staff exhibit similar regional variations: Nurses received higher patient satisfaction ratings in the Southern/Jordan Valley region and significantly lower ratings in the Middle region (Table 41).

Table 40: How Respondents Rated Their Overall Satisfaction with Physician, by Regional Distribution of Respondents

How respondents ranked their overall level of satisfaction with the services provided by physicians	Percent respondents		
	Northern	Middle	Southern/ Jordan Valley
Extremely satisfied	36.8%	14.7%	50.0%
Satisfied	59.9	72.7	40.5
Dissatisfied	2.6	9.0	6.8
Very dissatisfied	0.7	0.0	1.4
Don't know how I would rank my overall satisfaction	0.0	3.7	1.4

Table 41: How Respondents Rated Their Overall Satisfaction with Nurses, by Regional Distribution of Respondents

How respondents ranked their overall level of satisfaction with the services provided by nursing staff	Percent respondents		
	Northern	Middle	Southern/ Jordan Valley
Extremely satisfied	27.0%	11.4%	40.5%
Satisfied	60.5	73.5	52.7
Dissatisfied	9.9	11.0	5.4
Very dissatisfied	2.0	1.2	1.4
Don't know how I would rank my overall satisfaction	0.7	2.9	0.0

Table 42 presents respondents' overall ratings of their levels of satisfaction with the services that were provided by hospitals' ancillary personnel. Again, respondents in the Southern/Jordan Valley region exhibited consistently higher ratings than did other regions. For example, 41.9 percent of respondents in the Southern/Jordan Valley region indicated that they were "extremely satisfied" with the services provided by ancillary staff, while no respondents indicated that they were dissatisfied. Although respondents in this region gave a higher proportion of "extremely satisfied" ratings to ancillary staff, on average, respondents in the Northern region appear to provide overall more favorable ratings to ancillary staff; more than 80 percent of respondents rated the services they received from ancillary staff as "satisfied" to "extremely satisfied," while only 71.6 percent of respondents in the Southern/Jordan Valley region expressed these views. Also noteworthy is the large proportion of respondents in the Middle region who indicated they were unable to rank their level of satisfaction with ancillary personnel, 54.7 percent.

Table 42: How Respondents Rated Their Overall Satisfaction with Ancillary Personnel, by Regional Distribution of Respondents

How respondents ranked their overall level of satisfaction with the services provided by ancillary staff	Percent respondents		
	Northern	Middle	Southern/ Jordan Valley
Extremely satisfied	28.9%	9.8%	41.9%
Satisfied	51.4	30.6	29.7
Dissatisfied	2.6	4.5	0.0
Very dissatisfied	1.3	0.4	0.0
Don't know how I would rank my overall satisfaction	15.8	54.7	28.4

In summary, MOH physicians and nurses are viewed quite favorably by hospital inpatients overall. However, significant gaps in communication exist between physicians and patients – and more so between nurses and patients. As implied by survey responses, nurses are not as involved in the daily management of hospital patients as one would expect. Respondents indicated that rarely are nurses involved in discussing important patient management information with them, such as their type of illness, treatment options, duration of hospital stay, and length of recovery. In fact, the gap in communication is so pervasive that nearly 79 percent of respondents indicated that nurses had explained nothing to them with respect to their illness. Also, results show that many patients (56.3 percent) believe that their level of communication with nurses would be significantly enhanced if nurses were to treat them with more respect and dignity. Physicians rated consistently higher than nurses in all areas of patient communication. However, they too fall significantly short of fulfilling patients' expectations with respect to communication. More than 50 percent of patients indicated that they would prefer to have physicians discuss with them the same four major issues: type of illness, treatment options, duration of stay, and length of recovery.

The importance of implementing effective policies aimed at enhancing the level of communication between physicians, nurses and patients cannot be overstated. To investigate this issue more robustly, we performed a series of logistic regression estimations, in an attempt to better understand those factors which most influence patients' overall level of satisfaction with the services produced by MOH hospitals. The estimated odds ratios and T-statistics are contained in Annex B. We modeled the dependent variable to be that of a dichotomous choice variable. In other words, we sought to better understand those factors that most influence a patient's decision to recommend or not recommend a hospital to friends or family members. Results clearly indicated, with near statistical certainty, that when all other factors are held constant, the most important factors that influence the probability of a patient recommending a specific hospital to friends and family members is the quality of communication that they have with nurses and physicians of that hospital. In fact, their level of communication with nurses has far greater influence on the probability of them recommending a hospital than does their level of communication with physicians. This issue of communication with medical professionals outweighs any variations in patient income, education, marital status, gender, health status, or health insurance status. The only variable that seems to be more important to patients' than their levels of communication with physicians and nurses, as a factor in determining whether or not they would recommend a particular hospital, is the quality of the hospital room.

7. Respondents' Views regarding Pain Management

When asked if they had experienced any pain during their stay in the hospital, 330 patients (70.1 percent of respondents) indicated that they had. Of those patients who experienced pain during their stay in the hospital, 48.5 percent stated that they had experienced frequent episodes of pain, 39.7 percent experienced occasional episodes of pain, while 11.8 percent experienced rare episodes of pain. When asked if doctors or nurses were aware of their pain, 89.9 percent stated that they were aware, while only 7.9 percent stated they were not. Only 50.9 percent of patients who experienced pain received pain medication during their hospital stay,[14] while 47.6 percent of them received no pain medication at all. The remainder were unsure as to whether or not they had received pain medication.

For those patients who experienced at least one episode of pain, Table 43 lists their frequency of pain, and whether or not they were prescribed pain medication during their stay in the hospital. Of the patients who experienced frequent episodes of pain during their stay in the hospital, nearly 50 percent of them stated that they received no pain medication during their stay. Hence, it appears that, at least from patients' perspective, MOH physicians and nurses are not properly managing patients' pain.

Table 43: Respondents who Experienced Pain and Physician's Pain Prescribing Behavior

Respondents' stated frequency of pain	Percent respondents who were prescribed pain medication during their hospital stay		
	Yes	No	Don't know
Frequently	48.1%	49.4%	2.5%
Occasionally	51.9	47.3	.8
Rarely	50.9	47.6	1.5

Among patients who experienced frequent episodes of pain but did not receive pain medication, 62.0 percent were Obstetric/Gynecology patients and 27.8 percent were Surgery patients (Table 44). Among those patients who reported occasional bouts of pain yet received no pain medication, 71.0 percent were. In other words, a significant and disproportionate number of Obstetric/Gynecology patients are not receiving optimal management of their pain during their hospital stays, a troubling finding.

[14] Of those patients who received pain medication, 31.3 percent were able to self-regulate the amount of pain medication they received.

Table 44: Patients who Experienced Pain, But Received No Pain Medication, by Department and Frequency of Pain

Respondents' stated frequency of pain	Internal Medicine	Surgery	Obstetrics/ Gynecology
Frequent	10.1%	27.8%	62.0%
Occasionally	16.1	12.9	71.0
Rarely	6.3	25.0	68.8

The data also suggest that patients across all departments are undermedicated in terms of pain relief. Table 44 shows that a non-trivial percentage of patients from all departments indicated that they experienced pain, yet received no pain medication: 30.2 percent of Internal Medicine patients, 39.1 percent of Surgery patients, and 57.8 percent of Obstetrics/Gynecology patients.

Table 45: Respondents who Experienced Pain and Provision of Pain Medication, by Hospital Department

Hospital department	Percent respondents who experienced pain and whether or not pain medication was provided to them		
	Yes	No	Don't know
Internal Medicine	65.1%	30.2%	4.8%
Surgery	60.9	39.1	0.0
Obstetric/Gynecology	41.1	57.8	1.1

Table 46 presents the regional distribution of patients who experienced pain during their stay in the hospital, and the percentage of them who were or were not provided with pain medication. The results are quite interesting: 84.6 percent of respondents in the Southern/Jordan Valley region who experienced pain during their stay in the hospital said they were provided with pain medication, while slightly more than 15 percent indicated they were not. These responses are quite different from those found elsewhere: Physicians in the Northern and Middle regions of the country appear to have very similar behaviors with respect to pain management: More than half of the respondents in each region reported that they received no pain medication during their stay in the hospital. The reasons for such stark regional variation in the management of pain are unclear. It is therefore imperative for the MOH to investigate this issue further.

Table 46: Respondents who Experienced Pain and Their Provision of Pain Medication, by Regional Distribution of Respondents

Region	Percent respondents who experienced pain and whether or not pain medication was provided to them		
	Yes	No	Don't know
Northern Region	48.5%	50.5%	1.0%
Middle Region	42.5	55.2	2.2
Southern/Jordan Valley Region	84.6	15.4	0.0

Patients who experienced pain during their stay in the hospital were asked them to rank the overall management of their pain by hospital staff. The results are presented in Table 47. Roughly 77.3 percent of respondents stated that they received at least "good" management of their pain by hospital personnel, while a non-trivial amount (19.7 percent) stated that they received "fair" to "very poor" management of their pain. This information along with other results in this section clearly suggests that hospital personnel may enhance the quality of care currently being provided to patients through better management of their pain.

Table 47: Respondents' Ranking of the Overall Management of Their Pain

How respondents ranked overall management of their pain by hospital personnel	Percentage distribution among respondents
Excellent	27.3%
Very good	27.3
Good	22.7
Fair	9.1
Poor	8.2
Very poor	2.4
I don't know how I would rank it	2.7

8. Conclusion and Policy Recommendations

This survey constitutes the first-ever national survey of hospital inpatients in Jordan. Although the population surveyed consisted only of inpatients from Ministry of Health hospitals, the results have broad implications for improving patient care in both the public and private sectors. Through this survey, policymakers are able to obtain a concise demographic profile of adult inpatients, their patterns of health insurance coverage, self-reported health status, and their views regarding hospitals' admissions processes, overall room status, safety, meals, visiting hours, staff communication, and pain management. The results of this survey raise several important policy issues with respect to socio-economic status of a typical patient, patients' self-reported health status, insufficient communication between patients and hospital doctors and nurses, and overall patient management.

Firstly, the survey provides policymakers with a more succinct picture of the demographic and economic attributes of the average adult MOH hospital inpatient. The typical inpatient is an unemployed, married female, approximately 37 years of age, with Tawjihi or less in educational attainment, a monthly household income of roughly JD204, and a person who appears to be in relatively good health. There is an equal likelihood that a patient is insured or uninsured. If insured, the typical patient's spouse is the primary policyholder of their health insurance benefits, and those benefits will typically provide third-grade entitlements. Conversely, if the patient is uninsured, his/her monthly household income will be – on average – 30 percent less than that of an insured person of similar demographic profile. Such information is important for several reasons: The MOH is currently engaged in policy dialogue that explores options for increasing the amount of cost-sharing to be imposed on patients at the point of service. With the monthly household incomes of patients averaging JD204, it is imperative for policymakers to obtain a clearer understanding of the effects on distributional equity of any changes in the existing policy. In other words, an understanding of who will bear the financial burden of any changes in co-payments or hospital per-diem rates – relative to household income – should be factored into the policy design.

Secondly, MOH patients, in general, view their overall health status as "good" to "excellent." However, a significant number consider themselves in "satisfactory" to "bad" health. Most startling, however, are the relatively few numbers of individuals who have physical examinations on a regular basis. It is therefore apparent, based upon our analysis, that a national program of health prevention is long overdue in Jordan. The cornerstone of any health promotion campaign should be the provision of information to populations about the benefits of having regular physical examinations – for both early detection and prevention of a variety of chronic and acute ailments. Such an effort – coupled with a concerted effort to change unhealthy behaviors of the people (e.g., through smoking cessation, exercise, weight reduction, etc.) – may assist in reducing what appears to be a relatively high rates of self-reported heart disease, hypertension, and diabetes among respondents.

Thirdly, overall MOH physicians and nurses are viewed quite favorably by their patients. The medical knowledge of both physicians and nurses is well-respected by MOH patients. However, significant gaps in communication exist between physicians and patients – and even more so between nurses and patients. Patients indicated that nurses rarely discuss important medical issues such as their

type of illness, treatment options, duration of hospital stay, and likely length of recovery. It is also apparent that patients, overall, believed that the level of communication with nurses would be significantly enhanced if nurses treated them with more respect and dignity. With respect to physician communication, patients prefer to have physicians discuss with them the four major issues noted above (type of illness, treatment options, duration of stay, and length of recovery) as a routine part of their care. In sum, significant work remains to be done in improving upon the level of communication between health care providers and their patient populations.

Fourthly, MOH physicians and nurses are not providing optimal pain management to patients. Nearly one-half of all patients who experienced pain during the period of this survey received no pain medication during their stay in the hospital. The numbers are quite troubling. The department that appears to be seriously under-managing patients' pain is the Obstetric/Gynecology department. As was discussed in earlier, of those patients who experienced frequent episodes of pain yet received no pain medication, more than 60 percent were Obstetric/Gynecology patients. Also troubling was the disproportionate representation of Obstetric/Gynecology patients among those patients who reported occasional bouts of pain yet received no pain medication. Hence, it is apparent from this survey that a significant number of Obstetric/Gynecology patients are not receiving optimal management of their pain. The authors recommend that the MOH provide Continuous Medical Education (CME) training on pain management to selected physicians, as well as similar information for patients. Realizing the importance of proper pain management for enhancing patients' well-being and recovery time, U.S. medical schools and residency program have integrated pain management, theory and practice, into the training curriculum of both medical students and residents.

Finally, MOH hospitals appear to be doing a relatively good job at providing overall services to their patient populations. Respondents were asked to rate their overall level of satisfaction with all services they received from hospitals; nearly 68 percent stated that overall they were "satisfied" with the level of services they had received. Another 20 percent indicated that they were "extremely satisfied." When asked if they would recommend the hospital to friends or family members who became ill and needed hospitalization, a high proportion, 76 percent, indicated that they would recommend the hospital. Only 21 percent of respondents stated they would not. The views expressed were virtually the same for both males and females. However, while MOH patients seem to value and appreciate the level of services that are currently being provided to them by hospital staff, their responses highlighted for policymakers several shortcomings as well, including the level of hygiene in common areas such as toilets, showers, sinks, and floors. Hence, one policy intervention for hospital directors might be greater supervision of the contract workers who clean these areas.

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Annex A. Surveyed Hospitals

Summary of Survey Structure

Patient Satisfaction Survey

(MOH Hospital Patients)

Northern Region (total of 155 patients sampled): numbers in parenthesis indicate the total number of patients who were selected from the specified hospital.

- Cluster 1 (Mafraq Cluster):
  - Al Mafraq Hospital (5)
  - Al Mafraq OB/Gyn Hospital (24)
  - Al Ramtha Hospital (13)

Sample Size (1) = 42

- Cluster 2 (Ajloun Cluster):
  - Al Iman Hospital (16)
  - Jarash Hospital (24)

Sample Size (2) = 40

- Cluster 3 (Irbid City Cluster):
  - Princess Basma Hospital (20)
  - Princess Badea Hospital (30)

Sample Size (3) = 50

- Cluster 4 (Yarmouk Cluster):
  - Al Yarmouk Hospital (6)
  - Princess Raya Hospital (17)

Sample Size (4) = 23

Middle Region (total of 249 patients sampled)

- Cluster 5 (Basheer Cluster)
  - Al Basheer Hospital (102)
  - Totanji Hospital (18)
  - Al Nadeem Hospital (22)

Sample Size (5) = 142

- Cluster 6 (Zarka Cluster):
  - Al Zarqa Hospital (50)
  - Prince Faisal Hospital (29)

Sample Size (6) = 79

- Cluster 7 (Salt Cluster):
  - Al Hussein Hospital (28)

Sample Size (7) = 28

Southern Region (total of 50 patients sampled)

- Cluster 8 (Karak Cluster):
  - Al Karak Hospital (25)
  - Princess Salma Hospital (3)
  - Ghor Al Safi Hospital (5)

Sample Size (8) = 33

- Cluster 9 (Ma'an Cluster):
  - Ma'an Hospital (15)
  - Queen Rania Hospital (2)

Sample Size (9) = 17

Jordan Valley Region (total of 21 patients sampled)

- Cluster 10 (Abu Obeideah):
  - Abu Obaidah Hospital (9)
  - Mu'ath Bin Jabal Hospital (3)

Sample Size (10) = 12

- Cluster 11 (Shouneih):
  - Al Shuneh Hospital (4)
  - Princess Eiman Hospital (5)

Sample Size (11) = 9

Annex B. Logistic Regression Estimates (Odds Ratios)

Dependent Variable (Dichotomous Choice): would respondent recommend this hospital to a friend or family member who became ill and needed hospitalization (yes=1, no=0)

Independent Variable Definitions	Odds Ratios (t-statistics)	
§Dummy variable for respondents reporting "very good" to "excellent" health	2.894	(1.86)*
Dummy variable for respondents reporting "satisfactory" to "good" health	2.963	(1.96)*
ŦDummy variable for nurse communication being "very good to "excellent"	8.625	(4.50)***
Dummy variable for nurse communication being "fair" to "good"	2.454	(1.92)*
ŦDummy variable for physician communication being "very good" to "excellent"	6.996	(3.44)***
Dummy variable for physician communication being "fair" to "good"	1.607	(0.81)
πDummy variable for room status being "very good" to "excellent"	14.640	(1.99)*
Dummy variable for room status being "fair" to "good"	2.685	(0.73)
ψDummy variable for Internal Medicine Department	1.572	(0.84)
Dummy variable for Surgical Department	1.720	(1.12)
†Dummy variable for Northern Region	1.268	(0.72)
Dummy variable for Southern Region	2.415	(1.79)*
‡Dummy variable for age cohort 18 to 33	1.087	(0.13)
Dummy variable for age cohort 34 to 49	2.500	(1.41)
Dummy variable for age cohort 50 to 64	2.828	(1.51)
Dummy variable for marital status (married=1, otherwise=0)	.339	(-2.30)**
Dummy variable for respondents gender (male=1, female=0)	.449	(-1.80)*
Patients' household income (continuous variable)	.998	(-2.10)**
Dummy variable for insurance status (insured=1, uninsured=0)	1.281	(0.831)
Intercept Term	.006	(-3.02)***

*p<.05, **p<.025, ***p<.001. §Excluded dummy variable category are respondents in "bad" health, ŦExcluded dummy variable category are respondents stating poor to very poor communication, πDummy variable are those respondents stating poor to very poor room conditions, ψExcluded dummy variable category is the Obstetric/Gynecology department, †Excluded dummy variable category is the Middle region, ‡Excluded dummy variable is the 65 years and older cohort.

Annex C. Patient Satisfaction and Pain Management Survey Instrument

PHR*plus* Patient Satisfaction Survey

2005

(Confidential Patient and Hospital Information)

(ENGLISH VERSION)

Information to be compiled and viewed by authorized personnel only

Survey Number_____ **Patient Code_____**

Hospital Code_____

Department: 1. Internal Medicine 2. Surgery 3. Obstetric/Gynecology

Surveyors Name_____

Interview Status:

Date of Interview (day/month/year)_____

Time of Interview Start Time_____ Ending Time _____

Interview completed (Yes/No)_____

Re-interview scheduled date_____

Re-interview Start Time _____ Ending Time _____

Notes

Section I

Background Information

(Age 18 and over)

No.	Questions and Filters	Coding Categories	Skip
00	How many nights have you spent as a patient in this hospital?	Enter the total number of nights_____ *Enter whole numbers only, If patient has spent less than one night in hospital, enter the number 555*	
01	What is your nationality?	Jordanian……..1 Non-Jordanian ……2 (permanent resident) Non-Jordanian ……3 (not permanent resident) Other (specify)_____4	
02	Gender of respondent (conduct visual assessment)	Male…….1 Female……..2	
03	In what month and year were you born?	Month_____ Don't know month…….……98 Year _____ Don't know year…….……98	
04	How old were you on your last birthday? (compare and correct 03 and/or 04 if inconsistent)	Record age (in completed years) _____	
05	What is your martial status?	Single…….……1 Married…….……2 Separated…….……..3 Divorced……4 Widow/Widower……5	
06	What is the highest level of education that you have attained?	Illiterate……1 Less than Tawjihi ……..……2 Tawjihi……..……3 Diploma…….……..4 (2-year post-Tawjihi) Baccalaureate ……..……5 Masters Degree ……6 Doctorate or equivalent ……7 Other (specify) _____8	
07	What is your current work status?	Unemployed ……..……..……1 Employed (full-time)…...……2 Employed (part-time) ……3 Self-employed (full-time) ……4 Self-employed (part-time) ……5 Student ……..6 Volunteer worker ……..7 Trainee ……..8 Housewife/husband ……..9 Never worked ……..……10 Retired ……11	Go to 11 Go to 11 Go to 11 Go to 11 Go to 11 Go to 11 Go to 11
08	What is the permanency of your work?	Permanent…….……1 Seasonal……2 Occasional……..3	
09	What is your main occupation?	Specify_____ _____	

No.	Questions and Filters	Coding Categories	Skip
10	Who do your work for (which sector)	Self-employed……1 Government……2 Private sector……3 Military……..4 Public Security /Civil Defense……...5 NGO (non-government) ……6 International aid organization ……7 Other (specify) _____8	
11	What form of transportation did you use to get to the hospital?	Bus or similar public transportation ……1 Family/friend ……...2 Ambulance ……..……3 Taxi ……4 Drove my own vehicle ……5 Other (specify) _____6 _____	

Section II

Health Status Information

(Age 18 and over)

No.	Questions and Filters	Coding Categories	Skip
12	In general, how would you rate your health status in comparison to others of your same age and gender?	Excellent……..……1 Very good…….……...2 Good……3 Satisfactory…….4 Bad…….……5 Don't know……..….98	
13	Has a doctor ever told you that you have or had any of the following conditions?	A) Diabetes Yes…….…….1 No…….…….2 Don't know…… 98 B) Heart Condition Yes…….…..……1 No…….…….2 Don't know……..…..….98 C) High Blood Pressure Yes…… .1 No……..2 Don't know……98	Continue Go to (B) Go to (B) Continue Go to (C) Go to (C)
14	Do you usually take any prescribed drugs on a regular basis?	Yes……..……1 No…….……..2	Go to 17
15	Are these drugs used in the treatment of a chronic ailment?	Yes…….1 No…….2 Don't know…….…….98	
16	How much does this medication cost, monthly?	Amount (in Dinars)_____ I don't pay for them……1 Don't know……..……98	
17	Did you have to take days off work/school/housework because of heath reasons, prior to this episode of illness, over the past 6 months?	Yes……..…….……..1 No……..……2	Go to 19
18	How many days off did you take from work/school/housework because of health reasons, prior to this episode of illness, over the past 6 months?	Number of days_____ Don't know……..…….……98	
19	What was the gender of the doctor(s) in this hospital that conducted your physical examination(s)?	Male doctor……1 Female doctor……2 I have had male and female doctors…..…3 I did not have a physical examination…...4	
20	In general, do you prefer to be examined by a male or a female doctor?	Male doctor……..……...……1 Female doctor…….……..2 Does not matter……..……..…3 Don't know…….……98	
21	Do you have regular checkups	Yes……1 No……2	Go to 23
22	How often do you go for regular checkups?	More than once per year……1 Once per year…….2 Every other year…….3 Other (specify)_____4	

Section II

Health Status Information

(Age 18 and over)

23	During the last 12 months, excluding events that are associated with this episode of illness, have you experienced any persistent health problems that have lasted for at least 3 months? (including disability, disease, injury, etc)	Yes……1 No……2	Go to 26
24	What was that illness (s)?	Specify _____ _____	
25	Are you under any medical treated related to the above mentioned (Q25) health problem?	Yes……..1 No……..2	
26	What is your monthly household income?	Enter Amount in JDs_____ Don't know……..……....98	

Section III

Admission Information

(Age 18 and over)

No.	Questions and Filters	Coding Categories	Skip
27	Were you transferred to this hospital from another hospital?	Yes……1 No……2	 Go to 29
28	What type of hospital were you transferred from?	MOH hospital……1 RMS hospital……2 University hospital……3 Private sector hospital……4	For all responses Go to 33
29	From where did you receive the initial diagnosis that was associated with this episode of illness?	MOH health center……1 RMS health center……2 Private clinic……3 UNRWA clinic……4 MOH hospital ……5 RMS hospital……6 Private hospital……7 Other (specify)_____8 Don't know_____98	
30	Did a doctor from the facility that conducted your initial diagnosis refer you to this hospital?	Yes……1 No……2	
	I would like to ask you some questions concerning the Admission process itself		
31	Were you admitted through the Emergency Room Department?	Yes……1 No……2 Don't know……98	Go to 33
32	Were you admitted through one of the hospital's outpatient departments?	Yes……1 No……2 Don't know……98	
33	Was the admissions process clearly explained to you (family member/friend)?	Yes……1 No……2 Don't know……98	
34	How would you rank the services that you (family member/friend) received from personnel within the Admissions Department?	Excellent……1 Very Good……2 Good……3 Fair……4 Poor……5 Very Poor……6 Don't know……98	
35	Were you directly admitted as an inpatient or did you have to wait for a period of time, at the hospital, prior to admission onto the ward?	I was directly admitted……1 I was not directly admitted, I had to wait……2 Don't know……98	Go to 37 Go to 37

Section III

Inpatient Room Information

(Age 18 and over)

36	How long did you have to wait in the Reception or Admission area prior to admission?	Less than 15 minutes……1 15 to 30 minutes……2 31 to 45 minutes……3 46 to 60 minutes……4 More than one hour but less than 2 hours……5 2 hours and more……6 Don't know……98	
37	Which hospital department (ward) were you originally admitted into?	Internal Medicine……..1 Obstetric/Gynecology……..……2 Surgery……3 Pediatrics……..4 Intensive Care/Critical Care Unit……5 Other (specify)……..6	
38	Were you escorted to your room (ward) by a hospital staff member?	Yes……1 No……..……..2 Don't know……....98	 Go to 40 Go to 41
39	Who escorted you to your room?	Admission staff……..……1 Nursing staff……2 Physician staff……...3 Other hospital staff member……..……...4 Don't know……..98	Go to 42 Go to 42 Go to 42 Go to 42 Go to 41
40	Why were you not escorted to your room (ward) by a hospital staff member?	Specify _____ _____ _____	
41	Would you have preferred to be escorted to your room?	Yes……1 No……2	
	I would now like to ask you some questions about your hospital room		
42	Upon arrival to your room (ward), how would you rank its overall condition?	Excellent…..……1 Very Good……2 Good……3 Fair……..4 Poor……..5 Very poor……6 Don't know……..……98	
43	Did hospital staff provide you with instructions on how to use the room (ward) facilities (e.g., operation of the TV, restroom, shower, bed)?	Yes……1 No……..2	Go to 45
44	Would you have preferred that someone explained the operation of the room facilities to you beforehand?	Yes……1 No……..2	
45	Where you provided with a hospital identification bracelet?	Yes……1 No……..2	
46	How often was your room (ward) cleaned?	Once per day……..1 More than once per day……..……2 Upon request……..3 My room was never cleaned…..……4 Don't know……..98	

Section III

Inpatient Room Information

(Age 18 and over)

47	How often were your bed sheets changed?	Daily……..1 Every other day..…….2 Once per week…..…….3 Upon request…...…….4 They were never changed……5 Don't know……..……98	
48	How would you rate the level of cleanliness and overall condition of the toilets, showers, sinks and floors of the hospital?	Excellent……..……..……..1 Very Good……..…….2 Good……..……..……3 Fair…….……4 Poor…….5 Very Poor……6 Don't know……98	
49	How would you best describe your feelings concerning the overall safety of your hospital room?	Excellent……..……..……..1 Very Good……..…….2 Good……..……..……3 Fair…….……4 Poor…….5 Very Poor……6 Don't know……98	
	I would now like to ask you a few questions concerning the food services at this hospital		
50	At anytime during your hospital stay, have you been under the care of a hospital dietician?	Yes……1 No……..……..2 Don't know……98	
51	Did you eat any hospital provided meals?	Yes…….……..1 No……2	Go to 53
52	Why did you not eat any hospital provided meals?	No meals were offered to me…….……..1 I do not trust hospital food……..……2 I prefer to eat home cooked food…….……3 Other (specify)……4	For all responses to Go to 56
53	Were the scheduled timings of the meals convenient for you?	Yes…….……..1 No……..……..2	
54	How would you rate the overall temperature of the meals that were provided (i.e., was the food warm enough)?	Excellent……..……..……..1 Very Good……..…….2 Good……..……..……3 Fair…….……4 Poor…….5 Very Poor……6 Don't know……98	
55	How would you rank your level of satisfaction with the quantity of meals served?	Extremely satisfied…….……..1 Satisfied……2 Dissatisfied……..…….3 Very dissatisfied……...……4 Don't know……98	
56	Were you able to sleep comfortably in your room (ward)?	Yes……1 No…….2	Go to 58

57	Why were you not able to sleep comfortably in your room?	*More than one answer is possible.* ***Record all responses.*** *If more than one answer is obtained they should be record* Other patients in the room were noisy……..….1 The hospital staff were noisy……2 Visiting hours were not enforced…….3 I was often disturbed by cleaning personnel...4 Their was too much light in the room…..……5 I did not feel safe in the room……..6 The room temperature was too cold…….7 The room temperature was too hot…….……..8 The room had a terrible smell……..…9 I felt lonely……..……..10 Other (specify)_____11	
58	Were your family members and friends provided with a sufficient amount of visiting hours per day?	Yes…….…..……1 No……....……..……..2 Don't know……..98	
59	Upon admission into the hospital, was it explained to you the total number of days that you would remain in the hospital?	Yes……1 No…….2	
60	In summary, how would you rank your overall level of satisfaction with your hospital room and the various hotel amenities that have been provided to you?	Extremely satisfied…….……..1 Satisfied……2 Dissatisfied……..……..3 Very dissatisfied……...……4 Don't know…….98	

Section IV

Staff Communication

(Age 18 and over)

	I would now like to ask you some questions concerning the hospital staff		
61	Were physician and nursing staff easy to identify?	Yes……..……..1 No…….……2 Don't know……..……..98	Go to 63
62	Why were they not easy to identify?	They did not wear ID badges……..……..1 They did not wear identifiable clothing……2 They rarely or never introduced themselves….3 Other (specify)_____4	
63	Were hospital administrative staff easy to identify?	Yes……1 No……2 Don't know……..98	Go to 65
64	Why were they not easy to identify?	They did not wear ID badges……..……..1 They did not wear identifiable clothing……2 They rarely or never introduced themselves….3 Other (specify)_____	
65	Were cleaning staff easy to identify?	Yes……1 No……2 Don't know……..…98	Go to 67
66	Why were they not easy to identify?	They did not wear ID badges……..……..1 They did not wear identifiable clothing……2 They rarely or never introduced themselves….3 Other (specify)_____4	
67	What aspects of your illness did doctor(s) explain to you?	*More than one answer is possible.* ***Record all responses****. If more than one answer is obtained it should be recorded* Type of illness……..……1 Treatment options.……2 Duration of hospital stay……..……3 Length of recovery……..……4 Nothing was explained to me……..5 Other (specify)_____6	
68	Would aspects of your illness would you have preferred doctors to explain to you?	*More than one answer is possible.* ***Record all responses****. If more than one answer is obtained it should be recorded* Type of illness……..……1 Treatment options.……2 Duration of hospital stay……..……3 Length of recovery……..……4 Other (specify)_____5	
69	Did doctor(s) ask you or your family members information about your medical condition and past medical history?	Yes……1 No……2 Don't know_____98	

70	What aspects of your illness did nurses explain to you?	*More than one answer is possible.* ***Record all responses****. If more than one answer is obtained it should be recorded* Type of illness……..……1 Treatment options.……2 Duration of hospital stay……..…….3 Length of recovery……..……4 Nothing was explained to me……..….5 Other (specify)_____6	
71	Did nurses ask you or your family members information about your medical condition and past medical history?	Yes……1 No…….……2 Don't know_____98	
72	How would you rate the level of communication between yourself and the doctor(s)?	Excellent…….……..……..1 Very Good.……..……2 Good……..……..……3 Fair…….……4 Poor……5 Very Poor……6 Don't know……98	Go to 74
73	How might communication between yourself and the doctor(s) be improved?	*More than one answer is possible.* ***Record all responses****. If more than one answer is obtained it should be recorded.* By spending more time with me……..…....1 By listening more to my concerns……2 If he/she were to speak in simpler terms……....3 By asking my opinion about treatment options…..4 By treating me with more respect and dignity……5 By providing a call buzzer near my bedside…..…6 Other (specify)_____7	
74	How would you rank the level of communication between yourself and the nursing staff?	Excellent…….……..……..1 Very Good……..……2 Good……..……..……3 Fair…….……4 Poor……5 Very Poor……6 Don't know……98	Go to 76
75	How might communication between yourself and nurses be improved?	*More than one answer is possible.* ***Record all responses****. If more than one answer is obtained it should be recorded.* By spending more time with me……..…....1 By listening more to my concerns……2 If he/she were to speak in simpler terms……....3 By asking my opinion about treatment options…..4 By treating me with more respect and dignity……5 By providing a call buzzer near my bedside…..…6 Other (specify)_____7	

76	How would you rate the medical knowledge of the physician staff at this hospital?	Excellent……..……..……..1 Very Good……..……2 Good……..……..……3 Fair……..……4 Poor……5 Very Poor……6 Don't know……98	
77	How would you rate the medical knowledge of the nursing staff at this hospital?	Excellent……..……..……..1 Very Good……..……2 Good……..……..……3 Fair……..……4 Poor……5 Very Poor……6 Don't know……98	
78	How would you rate your level of satisfaction with the level of privacy that this hospital offers you, when communicating personal, medical related information to doctors and nurses?	Extremely satisfied……..……..1 Satisfied……2 Dissatisfied……..……3 Very dissatisfied……..……4 Don't know……98	

Section IV

Staff Communication

(Age 18 and over)

	I would now like to ask you a few questions concerning the management of your pain, during your stay in the hospital		
79	Did the doctor prescribe any pain medication to you during your stay in the hospital?	Yes……1 No……2 Don't know……98	Go to 81
80	Were you able to self-regulate the amount of pain medication you received?	Yes……1 No……2 Don't know……98	
81	Have you experienced any pain during your stay in the hospital?	Yes……1 No……2	Go to 85
82	How often have you experienced pain during your stay in the hospital?	Frequently……1 Occasionally……2 Rarely……3 Never……4	
83	Were doctors and nurses aware of your pain?	Yes……1 No……2 Don't know……98	
84	How would you rank the overall management of your pain, by the hospital staff?	Excellent……1 Very Good……2 Good……3 Fair……4 Poor……5 Very Poor……6 Don't know……98	
85	In summary, how would you rate your level of satisfaction with the overall services provided by the doctors in this hospital?	Extremely satisfied……1 Satisfied……2 Dissatisfied……3 Very dissatisfied……4 Don't know……98	
86	In summary, how would you rate your level of satisfaction with the overall services provided by the nursing staff of this hospital?	Extremely satisfied……1 Satisfied……2 Dissatisfied……3 Very dissatisfied……4 Don't know……98	
87	In summary, how would you rate your level of satisfaction with the overall services provided by the ancillary personnel of this hospital (e.g., physical therapist, radiology technicians, ward clerks)?	Extremely satisfied……1 Satisfied……2 Dissatisfied……3 Very dissatisfied……4 Don't know……98	

Section V

Health Insurance Information

(Age 18 and over)

No.	Questions and Filters	Coding Categories	Skip
88	Are you currently insured by a public or private sector entity?	Yes……1 No……2 Don't know……98	 Go to 99 Go to 99
89	Of the organizations listed, which best describes your health insurance provider?	Civil Insurance Program……1 (Ministry of Health) Royal Medical Services……2 University ……3 Private Health Insurance……4 (company sponsored, none university) Private Health Insurance……5 (none company sponsored, non-university) Other (specify)_____6 Don't know……98	
90	What is the grade status of your health insurance?	First……1 Second……2 Third……3 Other (specify)_____4 Don't know……98	
91	Who pays for this insurance?	Individual/himself/herself……1 Husband/wife……2 Son/daughter……3 Father/mother……4 Grandson/granddaughter……5 Brother/sister……6 Retirement rights……7 Other (specify)_____8 Don't know……98	
92	Do you have more than one source of health insurance coverage?	Yes……1 No……2	 Go to 95
93	Of the organizations listed, which best describes this second source of health insurance?	Civil Insurance Program……1 (Ministry of Health) Royal Medical Services……2 University ……3 Private Health Insurance……4 (company sponsored, none university) Private Health Insurance……5 none company sponsored, non-university) Other (specify)_____6 Don't know……98	
94	Who pays for this second source of health insurance?	Individual/himself/herself……1 Husband/wife……2 Son/daughter……3 Father/mother……4 Grandson/granddaughter……5 Brother/sister……6 Retirement rights……7 Other (specify)_____8 Don't know……98	

Section V

Health Insurance Information

(Age 18 and over)

95	Will your health insurance provider be covering this episode of your treatment cost (compare and correct 88 and/or 95 if inconsistent)?	Yes……1 No……2 I don't have health insurance……3 Don't know……98	Go to 97 Go to 99
96	Why didn't you use your health insurance provider for this episode of your treatment cost?	I don't have health insurance……1 Insufficient coverage for the required medical procedure(s)……2 Difficult administrative procedures for getting approval……3 Limited choice of facilities……4 Long waiting time at the facilities……5 Other (specify)_____6 Don't know……98	Go to 99
97	What percentage of your treatment cost do you expect your health insurance provider will be covering?	Specify _____ (e.g., 50% must be entered for one-half of payment).	If amount entered is 100% then Go to 100
98	Who do you expect to pay for the remainder of your treatment cost for this episode of care?	Out of pocket……1 (self payment) Family/Friends……2 Charity……3 I don't expect to pay……4 Other (specify)_____5 Don't know……98	For all responses Go to 100
99	Who do you expect to pay for this episode of your treatment in the hospital?	Self-pay……1 Friends/family……2 Royal Court……3 Prime Ministry……4 Charity (private)……5 I don't expect to pay……6 Other (specify)_____7 Don't know……98	
100	Prior to being admitted into hospital, did you consider the cost of treatment?	Yes……1 No……2	
101	In summary, how would you rate the overall services that you have received at this hospital?	Extremely satisfied……1 Satisfied……2 Dissatisfied……3 Very dissatisfied……4 Don't know……98	
102	Would you recommend this hospital to friends/family members who became ill and needed hospitalization?	Yes……1 No……2 Don't know……98	

Annex D. Reference List

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